

Claim Amendments

1. (Twice amended) Apparatus for signaling a cumulative amount of weakening of a test material resulting from exposure to a hazardous environment in the ground containing material-consuming organisms, comprising:

(a) an elongated body;

(b) a test element supported relative to the body and comprising the test material;

(c) [means] openings extending through the body, the openings being transverse to a longitudinal axis of the body, the openings being operative for controllably exposing the test element to the hazardous environment containing the material-consuming organisms and for providing passage for the organisms through the body to the test material;

(d) means for applying a load force to the test element, the load force being effective for displacing a portion of the test element when there is a predetermined amount of weakening of the test element caused by consumption thereof by the organisms;

(e) a flag member movably supported relative to the body and coupled to the test element for movement in projecting relation to the body when the test element is weakened to the predetermined amount, with at least a portion of the flag member being movable from a first position enclosed within the body to a second position upward and out of the body beyond the hazardous environment.

2. (Twice amended) The apparatus of claim 1, wherein [the means for controllably exposing comprises] the body having a cavity for enclosing the test element[, a side wall of the body having an opening therein for communicating with the hazardous environment].

3. (Twice amended) Apparatus for detecting the presence and eating activity of organisms that damage structures by consuming portions thereof, the apparatus comprising:

(a) an elongated body;

(b) a bait element supported relative to the body and comprising a consumable structural material;

(c) [means] openings extending through the body, the openings being transverse to a longitudinal axis of the body, the openings being operative for controllably exposing the bait element to the organisms and for providing entrance passages for the organisms through the body to the bait element;

(d) means for applying a load force to the bait element, the load force being effective for displacing a portion of the bait element when there is a predetermined amount of weakening of the bait element caused by consumption thereof by the organisms;

(e) a flag member movably supported relative to the body and coupled to the bait element for movement in projecting relation to the body when the bait element is weakened to the predetermined amount by the organisms, with at least a portion of the flag member being movable from a first position enclosed within the body to a second position upward and out of the body beyond the hazardous environment.

4. (Twice amended) The apparatus of claim 3, wherein [the exposing means comprises] the body [having] has a cavity for enclosing the bait element, wherein the openings are in a side wall of the body [having an entrance passage formed therein for admitting the organisms].

5. (Once amended) The apparatus of claim 4, wherein the exposing means further comprises a barrier member covering the entrance passages, the barrier member being formed of a sheet of consumable porous material.

6. (Once amended) The apparatus of claim 5, wherein the sheet of consumable porous material is perforated for enhancing communication with the entrance passages.

7. (Original) The apparatus of claim 5, wherein the consumable material of the barrier member is selected from the group consisting of balsa wood, pine, and cardboard.

8. (Original) The apparatus of claim 5, wherein the body comprises an outer portion and a telescopically separable core portion, the bait element and the flag member being supported within the core portion, the sheet of consumable porous material being connected to the outer portion.

9. (Once amended) The apparatus of claim 4, wherein the entrance passages extend[s between a first opening in an outwardly facing surface of] through the side wall [and a second opening in an inwardly facing surface of the side wall, the first opening having a first area, the second opening having a

second area being less than the first area], the entrance passages smoothly tapering [between the first area and the second area] from a first larger diameter distal to the bait element to a smaller diameter proximate the bait element.

10. (Once amended) The apparatus of claim 4, wherein the body forms an elongate housing having respective bottom and top extremities, the entrance passages being [one of a] vertically spaced [plurality of entrance passages], and a consumable porous barrier member covering each of the entrance passages.

11. (Original) The apparatus of claim 10, wherein the entrance passages and the barrier member are on a first face of the body, the body also including a second face having counterparts of the entrance passages and the barrier member.

12. (Once amended) The apparatus of claim 3, wherein the means for applying a load force comprises: a spring, a first coupling for anchoring one end [to] of the bait element to the body, a second coupling for connecting an opposite end of the bait element to the spring, [and a] the spring [for] applying tensile load to the bait element through the second coupling.

13. (Original) The apparatus of claim 12, wherein the flag member is connected to the second coupling.

14. (Original) The apparatus of claim 3, wherein the bait element has a bait substance applied thereto.

15. (Original) The apparatus of claim 3, wherein the bait element is a wood member.

16. (Original) The apparatus of claim 3, wherein the bait element is a cardboard member.

17. (Twice amended) A method for monitoring a predetermined cumulative eating activity of organisms on a bait member, comprising:

(a) providing a housing body having an elongate cavity and a side wall passage that extends through the housing body in a direction that is transverse to a longitudinal axis of the housing body;

(b) anchoring one end of the bait member to the body with the bait member extending within the cavity;

(c) connecting a flag member to an opposite end of the bait member with the flag member extending to a position proximate a flag opening of the body;

(d) connecting a spring member between the flag member and the housing body for tensioning the bait member, wherein upon consumption by eating activity of the organisms, the bait member is sufficiently weakened and fractures whereupon the flag member is moved via action of the spring member from a first position enclosed within the housing body to a second position upward and out of the housing body;

(e) placing the housing body in a medium subject to infestation by the organisms with the side wall passage being accessible by the organisms and the flag opening being located outside the medium; and

(f) periodically observing the housing body for display [to] of the flag member in [an extended] the second position thereof.

18. (Original) The method of claim 17, further comprising interposing a consumable porous barrier between the medium and the side wall passage for preventing the medium from contacting the bait member.

19. (Thrice amended) Apparatus for detecting the presence and eating activity of organisms that damage structures by consuming portions thereof, the apparatus comprising:

(a) a body forming an elongate housing having respective bottom and top extremities;

(b) a bait element supported relative to the body and comprising a wood member having a bait substance applied thereto;

(c) means for controllably exposing the bait element to the organisms, comprising the body having a cavity for enclosing the bait element, a side wall of the body having a vertically spaced plurality of entrance passages formed therein for admitting the organisms, each of the entrance passages extending between a first opening in an outside surface of the side wall and a second opening in an inside surface of the side wall, the first opening having a first area, the second opening having a second area being less than the first area, the passages smoothly tapering between the first area and the second area, a consumable porous barrier member covering each of the entrance passages, the entrance passages and the barrier member being on a first face of the body, the body also including a second face

having counterparts of the entrance passages and the barrier member;

(d) means for applying a load force to the bait element, comprising a first coupling for anchoring one end ~~to~~ of the bait element to the body, a second coupling for connecting an opposite end of the bait element, and a spring for applying tensile load to the bait element through the second coupling, the load force being effective for displacing a portion of the bait element when there is a predetermined amount of weakening of the bait element;

(e) a flag member movably supported relative to the body and connected to the second coupling for movement in projecting relation to the body when the bait element is weakened to the predetermined amount by the organisms, with at least a portion of the flag member being movable from a first position enclosed within the body to a second position upward and out of the body.

20. Canceled

21. Canceled

22. (Once amended) The apparatus of claim 19, wherein the [bait element is a cardboard] wood member is selected from the group consisting of balsa wood or pine.

23. (Twice amended) A method for monitoring structural weakening of a material, the weakening resulting from exposure to subterranean organisms, the method comprising:

placing a tubular-shaped body, with a longitudinal axis in a vertical orientation, at least partially in soil, the material being entirely disposed within the body;

applying a force to the material, the force being effective to cause a displacement of at least a portion of the material when there is a weakening of the material;

providing a passageway through at least a portion of the body from the soil toward the material, the passageway being transverse to the longitudinal axis of the body, wherein the passageway is enclosed by one or more sidewalls, the passageway having a diameter being dimensioned to permit travel of the subterranean organisms from the soil toward the material and being tapered from a wide diameter end proximate to the soil to a narrow diameter end proximate to the material, whereby the passageway directs the subterranean organisms toward a specific portion of the material where the subterranean organisms can cause a weakening of the material; and

in response to the displacement, signaling the weakening of the material resulting from its exposure to the subterranean organisms, the signal comprising an exterior projection of a signaling member from the body.

24. (Previously presented) The method of claim 23, further comprising:

limiting exposure of the material to the soil while permitting exposure of the material to the subterranean organisms.

25. (Previously presented) The method of claim 23, wherein the passageway is tapered substantially linearly.

26. (Once amended) The method of claim 23, wherein the signaling member comprises a flag and the signaling step comprises:

ejecting at least a portion of the flag from the body.

27. (Previously presented) The method of claim 23, further comprising:

providing an annular-shaped skirt around the body near an end of the body distal from the soil, the skirt covering the ground in an area around the body, whereby the skirt provides a moisture barrier around the body and thereby enhances the attractiveness of the material to the subterranean organisms.

28. (Previously presented) The method of claim 23, further comprising:

providing an outer housing around the body, the outer housing having an opening for permitting access of the subterranean organisms to the passageway.

29. (Once amended) The method of claim 23, wherein the body has an elongate shape.

30. (Twice amended) A device for signaling the presence of a material-consuming organism, the device comprising:

a body having an outer wall;

a material consumable by the organism, the material being entirely disposed within the body;

an opening through the wall, the opening being transverse to a longitudinal axis of the body, the opening having a

diameter dimensioned to permit the organism to fit through the opening;

a passage in the body extending at least partially between the opening and the material, the passage having a sidewall enclosing the passage, the passage dimensioned to permit the organism to travel through the passage to reach the material, wherein the sidewall of the passage is tapered from a wide diameter end distal to the material to a narrow diameter end proximate to the material, whereby the tapered sidewall of the passage directs the organism to a specific portion of the material where the organism can consume the material and thereby cause a structural weakening of the material; and

a spring in tension with the material so as to apply a force to the material, the force being sufficient to cause a displacement of at least a portion of the material when there is a structural weakening of the material, the displacement effectuating an exterior projection of a signaling member from the body indicating the presence of the organism in the device.

31. (Previously presented) The device of claim 30, wherein the sidewall is tapered substantially linearly.

32. (Previously presented) The device of claim 30, further comprising:

a barrier disposed between the outer wall and the material, the barrier being at least partly effective in excluding soil particles from entering the passage but not excluding the organism from entering the passage.

33. (Previously presented) The device of claim 32, wherein the barrier comprises perforations.

34. (Previously presented) The device of claim 33, wherein the material consumable by the organism emits an odor attractive to the organism, the perforations enhancing communication of the odor out of the device.

35. (Previously presented) The device of claim 32, wherein the barrier is porous.

36. (Twice amended) The device of claim 30, wherein the device is positionable in soil where the material-consuming organism may be present and the signaling member comprises a flag, wherein the flag is coupled to the material for movement in projecting relation to the body in a direction away from the soil in response to the displacement.

37. (Previously presented) The device of 30, further comprising:

an annulus-shaped skirt disposed around the body near a top of the body for placement above ground.

38. (Twice amended) A device for signaling the presence of a material-consuming organism, the device comprising:

a body housing having an outer wall defining an inner cavity;

a body core, separable from the body housing, disposed within the inner cavity in a removably telescopic orientation;

a material consumable by the organism, the material being disposed within the body core;

an opening through the outer wall of the body housing, the opening dimensioned so that the organism can fit through the opening and reach the material, whereby the organism can consume the material and thereby cause a structural weakening of the material; and

a spring in tension with the material so as to apply a force to the material, the force being sufficient to cause a displacement of at least a portion of the material upon structural weakening of the material, the displacement effectuating a signaling member moving from a first position enclosed within the body to a second position upward and out of the body for indicating the presence of the organism in the device.

39. (Previously presented) The device of claim 38, further comprising:

a barrier disposed outside the body core, the barrier being substantially impervious to soil but not impervious to the organism.

40. (Previously presented) The device of claim 39, wherein the barrier comprises perforations.

41. (Previously presented) The device of claim 40 wherein the material consumable by the organism emits an odor attractive to the organism, the perforations enhancing communication of the odor out of the device.

42. (Previously presented) The device of claim 39, wherein the barrier is porous.

43. (Previously presented) The device of claim 39, wherein the barrier is separable from the body housing and the body core and is removably insertable therebetween.

44. (Previously presented) The device of claim 39, wherein the barrier is consumable by the organism.

45. (Previously presented) The device of claim 38, further comprising:

a passage formed on the body core and extending at least partially between the opening and the material consumable by the organism when the body core is engaged within the body housing, the passage having a sidewall, the passage dimensioned to permit the organism to travel through the passage toward the material.

46. (Once amended) The device of claim 45, wherein the sidewall of the passage is tapered from a wide end distal to the material consumable by the organism to a narrow end proximate to the material consumable by the organism, whereby the tapered sidewall of the passage directs the organism to a specific location on the material for consumption.

47. (Previously presented) The device of claim 46, wherein the sidewall is tapered substantially linearly.

48. (Once amended) The device of claim 38, wherein the signaling member comprises a flag coupled to the material for

movement in projecting relation to the body core in response to the displacement.

49. (Once amended) The device of claim 38, further comprising:

an annulus-shaped skirt disposed around the body housing near a top end of the body housing.

50. (Thrice amended) A device for signaling the presence of a material-consuming organism, the device comprising:

a body housing having an outer wall defining an inner cavity, the outer wall comprising an opening dimensioned so that the organism can fit through the opening;

a body core within the body housing, the body core substantially filling the cavity, the body core comprising a radial passage, a front face of the radial passage overlapping the opening, the passage dimensioned so that the organism can fit through the passage;

a material consumable by the organism within the body core, the material extending most of a length of the body housing, whereby the organism can reach the material by traveling through the opening and the passage, and whereby the organism can consume the material and thereby cause a structural weakening of the material; and

a spring in tension with the material so as to apply a force to the material, the force being sufficient to cause a displacement of at least a portion of the material when there is a structural weakening of the material, the displacement effectuating an indication of the presence of the organism in the device comprised of a flag member moving from a first

position enclosed within the body housing to a second position upward and out of the body housing.

51. (Previously presented) The device of claim 50, wherein the outer wall is approximately cylindrical in shape.

52. (Previously presented) The device of claim 50, wherein the material and the spring are approximately centered about a central vertical axis of the device.

53. (Previously presented) The device of claim 50, further comprising:

a barrier disposed outside the body core, the barrier being substantially impervious to soil but not impervious to the organism.

54. (Previously presented) The device of claim 53, wherein the barrier comprises perforations.

55. (Previously presented) The device of claim 54 wherein the material consumable by the organism emits an odor attractive to the organism, the perforations enhancing communication of the odor out of the device.

56. (Previously presented) The device of claim 53, wherein the barrier is porous.

57. (Previously presented) The device of claim 53, wherein the barrier is consumable by the organism.

58. (Once amended) The device of claim 50, wherein the passage has a sidewall that is tapered from a wide diameter end distal to the material consumable by the organism to a narrow diameter end proximate to the material consumable by the organism, for directing the organism to a specific location on the material for consumption.

59. (Previously presented) The device of claim 58, wherein the sidewall is tapered substantially linearly.

60. (Twice amended) The device of claim 50, wherein the flag member is coupled to the material for movement in projecting relation to the body core in response to the displacement with at least a portion of the flag member extending externally from the body housing and being viewable from a distance indicating presence of material-consuming organisms in the device.

61. (Previously presented) The device of claim 50, further comprising:

an annulus-shaped skirt disposed around the body housing near a top end of the body housing.

62. (Twice amended) A device for signaling the presence of material-weakening organisms, the device comprising:

a body having an exterior wall;
a plurality of transverse outer openings in the exterior wall of the body, dimensioned to permit the organisms to fit through;

a cavity within the body, the cavity having an interior wall, the cavity being substantially smaller than the body;

a plurality of transverse inner openings in the interior wall of the cavity, dimensioned to permit the organisms to fit through;

a material disposed within the cavity; wherein the organisms, when in contact with the material, cause a structural weakening of the material;

a spring in tension with the material so as to apply a force to the material, the force being sufficient to cause a displacement of at least a portion of the material when there is a structural weakening of the material, the displacement effectuating an exterior projection of a signaling member moving from a first position enclosed within the body to a second position upward and out of the body for indicating the presence of the organisms in the device.

63. Canceled

64. (Once amended) The device of claim 62, wherein the inner openings in the interior wall of the cavity are smaller than the outer openings in the exterior wall of the body.

65. (Once amended) The device of claim 62, further comprising:

a barrier disposed outside of the openings in the interior wall of the cavity.

66. (Previously presented) The device of claim 65, wherein the barrier comprises perforations.

67. (Previously presented) The device of claim 66, wherein the material disposed within the cavity emits an odor attractive to the organisms, and the perforations enhance communication of the odor out of the device.

68. (Once amended) The device of claim 62, wherein the signaling member comprises a flag coupled to the spring, the flag moving in projecting relation to the body in response to the displacement.

69. (Previously presented) The device of claim 62, further comprising:

an annulus-shaped skirt disposed around the body near an end of the body.

70. (Twice amended) A device for signaling the presence of subterranean material-weakening organisms in soil, the device comprising:

a body, having an exterior wall, for at least partial submersion in soil leading with a bottom end of the body, the body having a top end opposite from the bottom end;

a plurality of transverse openings in the exterior wall of the body, dimensioned to permit the organisms to fit through;

a material disposed within the body, wherein the organisms, when in contact with the material, cause a structural weakening of the material;

a cavity within the body, the cavity being substantially smaller than the body, the cavity being near the top end of the body;

a spring disposed within the cavity, the spring being held in tension by the material such that a structural weakening of the material causes an end of the spring to undergo a displacement, the displacement effectuating an exterior projection of a signaling member moving from a first position enclosed within the body to a second position upward and out of the body for indicating the presence of the organisms in the device.

71. (Previously presented) The device of claim 70, wherein the body is generally elongate in shape from the top end to the bottom end.

72. (Previously presented) The device of claim 70, further comprising:

a second cavity within the body, the second cavity being substantially smaller than the body, the second cavity containing the material, the second cavity having an interior wall, the interior wall having an opening dimensioned to permit the organisms to fit through;

73. Canceled

74. Canceled

75. (Previously presented) The device of claim 70, further comprising:

a barrier disposed outside of the material.

76. (Previously presented) The device of claim 75, wherein the barrier comprises perforations.

77. (Previously presented) The device of claim 76, wherein the material disposed within the cavity emits an odor attractive to the organisms, and the perforations enhance communication of the odor out of the device.

78. (Once amended) The device of claim 70, wherein the signaling member comprises a flag coupled to the spring, the flag moving in projecting relation to the body in response to the displacement.

79. (Once amended) The device of claim 70, further comprising:

an annulus-shaped skirt disposed around the body near the top end of the body.

80. (Twice amended) A device for monitoring structural weakening of a material disposed within a body to be placed at least partially in soil, the weakening resulting from exposure to subterranean organisms, the device comprising:

means for applying a force to the material, the force being effective to cause a displacement of at least a portion of the material when there is a weakening of the material;

a tubular-shaped body housing the material, the material being entirely disposed within the body, the body being placed in the soil and having a passageway disposed through at least a portion of the body from the soil toward the material, the passageway being transverse to a longitudinal axis of the body,

wherein the passageway is enclosed by one or more sidewalls, the passageway being dimensioned to permit travel of the subterranean organisms from the soil toward the material and being tapered from a wide diameter end proximate to the soil to a narrow diameter end proximate to the material, whereby the passageway directs the subterranean organisms toward a specific portion of the material where the subterranean organisms can cause a weakening of the material; and

means for signaling the weakening of the material, in response to the displacement, resulting from the material's exposure to the subterranean organisms, the means for signaling comprising a signaling member, with at least a portion of the signaling member being movable from a first position enclosed within the body to a second position out of the body.

81. (Twice amended) A device for monitoring structural weakening of a material disposed within a body to be placed at least partially in soil, the weakening resulting from exposure to subterranean organisms, the device comprising:

a spring mechanism that applies a force to the material, the force being effective to cause a displacement of at least a portion of the material when there is a weakening of the material;

a tubular-shaped body housing the material, the material being entirely disposed within the body, the body being placed in the soil and having a passageway disposed through at least a portion of the body from the soil toward the material, the passageway being transverse to a longitudinal axis of the body, wherein the passageway being dimensioned to permit travel of the subterranean organisms from the soil toward the material, the

passageway having a larger diameter opening proximate to the soil relative to a narrower diameter opening proximate to the material, whereby the passageway directs the subterranean organisms toward a specific portion of the material where the subterranean organisms can cause a concentrated weakening of the material; and

means for signaling the weakening of the material, in response to the displacement, as a result of the material's exposure to the subterranean organisms.